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ABSTRACT

Data obtained from the National Longitudinal Surveys of women who were 17 to 27 and 34 to 48 years of age in 1971 were utilized to analyze the potential female labor supply response to a national program of free day care centers. Women who were out of the labor force at the time of the 1971 survey were asked about their willingness to seek employment if free day care centers were available to them. Whether a woman would search for employment if given access to free day care facilities is hypothesized to be a function of (1) her family's composition, (2) her previous labor market behavior and attitudes, (3) her family's earnings, (4) her educational attainment, and (5) her geographic location and the demand for female labor in her locality. The analysis indicates that the availability of free day care centers would draw proportionally more black than white women with children under six into the labor force. For both whites and blacks, the impact would be greatest among those women with a positive orientation toward employment outside the home. (EM)

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A B S T R A C T

The analysis indicates that the availability of free day care centers would draw proportionally more black than white women with children under six into the labor force. For both whites and blacks, the impact would be greatest among those women with a positive orientation toward employment outside the home.

The Hypothetical Labor Market Response of Black and White Women to a National Program of Free Day Care Centers

Historically the labor force participation rate of women with children of preschool age has been significantly lower than the rate for women with older children or those who have no children (Bowen and Finegan, 1969; Cain, 1966; Mincer, 1962; and Sweet, 1973). This lower labor force participation rate is often cited as prima facie evidence of the need for a comprehensive national day care program. In a recently completed study of child care costs, Shortlidge and Brito (1977) calculated that working mothers with children under age six paid, on average, one-sixth to one-fifth of their hourly earnings for the care of their children. Thus, a program of free center care would appear to be an important means of overcoming the constraint of young children on the labor market activities of women. Despite the obvious importance of this issue, little empirical evidence exists concerning the extent to which a national day care program designed to provide free care would eliminate the inhibiting effect of children on female labor supply.

The National Longitudinal Surveys of women who were 17 to 27 and 34 to 48 years of age in 1971 provide a unique opportunity to analyze the potential female labor supply response to a national program of free day care centers. Women who were out of the labor force at the time of the 1971 survey were asked about their willingness to seek employment if free day care centers were available to them. This paper focuses on the response to this question by women with children under six years

of age. The data for the two age groups of women were combined after preliminary statistical analyses indicated no significant differences between them.

I THE ANALYSIS

Whether a woman would search for employment if given access to free day care facilities is hypothesized to be a function of (1) her family's composition, (2) her previous labor market behavior and attitudes, (3) her family's earnings,* (4) her educational attainment, and (5) her geographic location and the demand for female labor in her locality. Family composition may be an important consideration in this decision since it determines both the need for child care (number and ages of children) and the ability of the family itself to provide such care. Thus, women in families without individuals who may provide child care services might be expected to be more likely to seek employment in the event free center care were made available to them. Previous labor market behavior and attitudes toward the labor force may indicate the level of the woman's commitment to outside employment. Therefore, the greater this commitment, the higher is the expected likelihood that she may be willing to enter the labor force. Since family income, net of the woman's own contribution, is known to be inversely associated with female labor supply, it may be anticipated that this same negative relationship will hold in an analysis of the hypothetical probability of

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*Bowen and Finegan (1969); Cain (1966); Mincer (1962); Sweet (1973).

searching for work with the provision of free center care. No confident hypothesis can be offered about the impact of the woman's educational attainment. On the one hand, the positive relationship between educational attainment and potential earnings would be expected to make better educated women more likely to enter the labor force if free day care centers were available. On the other hand, the positive relationship between education and concern for child "quality" might make the better educated mothers less likely to be willing to entrust their children to strangers. Historically, day care centers have been concentrated in urban communities, the West and the South. For this reason, women residing in rural communities and in the North and East may be expected to have a greater propensity to look for employment if access to free center care were assured.

The dependent variable in this model is a dichotomy which takes the value of one if the woman stated unconditionally that she would look for employment if provided with a free day care center, and a value of zero otherwise. The analysis is restricted to women with children under six. Since Ordinary Least Squares would give inefficient estimates of the model's parameters, the model is estimated by means of LOGIT statistical procedures (Goldberger, 1964; and Theil, 1971). The independent variables are summarized in Table 1.

On the basis of their responses to the hypothetical question, black women are estimated to be three times more likely than white women to enter the labor force with the availability of free center care. The actual proportions are 50 and 17 percent, respectively (Table 1). This

Table 1 Means, Standard Deviations, Variable Definitions, and Expected Relationships

Variables	Definitions	WHITES		BLACKS		Expected signs
		Means	Standard deviations	Means	Standard deviations	
Self headed	1 = Respondent is head of household and lives alone with her children; 0 = otherwise	0.041	0.197	0.224	0.417	+
Extended family	1 = Respondent (and husband if married) live in a household which includes other adult relatives 0 = otherwise	0.099	0.299	0.303	0.460	-
Teenaged child	1 = A son or daughter 14 to 17 years old living in household; 0 = otherwise	0.124	0.329	0.224	0.117	-
Infant	1 = Only child under 6 years old is under 3 years; 0 = otherwise	0.432	0.495	0.364	0.481	+
Both infant and preschooler	1 = Both a child under 3 and one 3 to 5 years old; 0 = otherwise	0.240	0.427	0.327	0.469	+
Weeks worked	Actual weeks worked between 1969 and 1971	4.254	9.959	7.604	3.600	+

(Table continued on next page.)

Table 1 Continued

Variables	Definitions	WHITES		BLACKS		Expected signs
		Means	Standard deviations	Means	Standard deviations	
Attitude toward role of women	An index with value of 3 to 15 measuring the respondent's general attitude toward mothers with young children working outside the home. The higher the value of the index the more favorable the attitude	9.497	2.546	10.720	2.465	+
Personal work orientation	1 = Respondent has a positive orientation toward her own employment outside the home; 0 = otherwise	0.186	0.389	0.457	0.498	+
Family earnings in 1970	Total family earnings from wages, salaries, tips, commissions and self-employment	8025.0	5752.0	3369.0	3802.0	-
Educational attainment	Highest grade in school completed	11.760	2.157	10.010	2.578	?

(Table continued on next page.)

Table 1 Continued

Variables	Definitions	WHITES		BLACKS		Expected signs
		Means	Standard deviations	Means	Standard deviations	
Index	A measure of the proportion of jobs in each SMSA which might be expected to be held by women, based upon the industry mix of the SMSA. (Bowen and Finegan, 1969: 772-776).	30.580	5.278	30.760	5.393	+
Rural	1 = Does not reside in an SMSA; 0 = otherwise	0.349	0.477	0.351	0.477	?
South	1 = Resides in the South Atlantic Census Division or East South Central Census Division; 0 = otherwise	0.190	0.393	0.464	0.499	?
West	1 = Resides in Pacific Census Division; 0 = otherwise	0.144	0.351	0.050	0.218	?
Probability of entering labor force	1 = Would unconditionally look for work if provided with a free day care center; 0 = otherwise	0.169	0.374	0.499	0.500	
Number of sample cases		1009		379		

finding is consistent with a greater reliance on center care among black than white working mothers (Shortlidge and Brito, 1977) and a more favorable attitude toward day care centers among blacks than whites as expressed in national opinion polls (The Harris Survey Yearbook of Public Opinion, 1971). Although this finding suggests intercept differences between the two races, a test of equality of slopes indicated that there were significant racial differences in the behavior of the other explanatory variables. This was the statistical justification for the racial stratification employed in the analysis.

Effect of Family Composition

The labor force participation rate for women with children under three years of age (infants) is significantly lower than the rate for women with children three to five years of age (preschoolers) (Bureau of Labor Statistics, 1975). Furthermore, the average expenditures for child care by working women with children under three is higher than the expenditure by women with children three to five years of age (Shortlidge and Brito, 1977). Thus, women with children under three might be expected to be most receptive to a national program of free center care. However, except for black women with both a child under three years old and a child three to five years old, mothers of infants indicate no greater likelihood than those with older preschool children of seeking employment if a free day care center were available (Table 2). Thus, while a program of free day centers appears unlikely to narrow differences in the labor force participation rates between white women with infants and those with preschoolers, it might tend to decrease the same

Table 2 LOGIT Results: Maximum Likelihood Estimates of Probability of Entering Labor Force with the Availability of Free Day Care Centers

Explanatory variables	Whites		Blacks	
	Estimates	t-ratios	Estimates	t-ratios
Family composition				
Self headed	0.655	1.64*	0.147	0.39
Extended family	-0.053	-0.16	-0.245	-0.77
Teenaged child	-0.456	-1.38	0.484	1.53
Infant	-0.060	-0.27	0.360	1.17
Both an infant and a preschooler	0.148	0.61	0.593	1.86*
Respondent's labor market behavior and attitudes				
Weeks worked since 1969	0.004	0.41	-0.006	-0.61
Attitude toward role of women	0.128	3.46**	-0.040	-0.81
Personal work orientation	1.632	8.54**	1.946	7.72**
Income and education				
Family earnings in 1970	$-0.0X10^{4}$	-0.93	$-0.1X10^{4}$	-1.93*
Educational attainment[a]	-0.112	-2.55**	-0.027	-0.53
Residential and environmental characteristics				
Index demand female labor	0.002	0.09	-0.014	-0.56
Rural[a]	-0.139	-0.69	0.380	1.32
South[a]	0.120	0.50	-0.132	-0.45
West[a]	0.170	0.66	0.776	1.38
Constant	-1.921	-2.27*	0.049	0.04
Number of sample cases	1009		379	
Pseudo R^2 for model	.18		.30	
Likelihood ratio test	114.16		97.63	

* Significant at $\alpha < .05$, one-tail test, unless otherwise indicated.
** Significant at $\alpha < .01$, one-tail test, unless otherwise indicated.
a Test of significance includes a two-tail test.

differential among blacks by removing the inhibiting effect of having both an infant and a preschooler.

Contrary to expectation, responses to the hypothetical question were unrelated to the presence in the family of persons who might provide child care. On the other hand, white women who head their own households indicate a greater likelihood of entering the labor force in response to free center care than do those who live with their husbands. The fact that the same pattern is not discernible among black women may be explained by differences between the two races in the pattern of child care utilization. Reliance on nonfamily care (which includes care by nonrelatives and day care centers) is higher among white women living alone than among those who live with other relatives or with their husbands (Shortlidge and Brito, 1977). However, black women who head households more frequently leave their children with relatives who reside nearby in the community. Thus, the nonworking white mother who heads a household may be more likely than her black counterpart to feel constrained from seeking employment because of the absence of family child care alternatives in the community.

Labor Market Behavior and Attitudes

A woman's attitude toward the role of women, her own orientation to the labor market, and her recent exposure to the labor market are hypothesized to be positively related to the probability that she would look for work if free center care existed. Attitude toward the role of women is measured by an index devised from the woman's responses to three questions about the propriety of mothers with young children

working outside the home under conditions ranging from economic necessity to the opposition of the husband. Among working mothers it has been demonstrated elsewhere that the more favorable a woman's attitude toward the work role of women, the greater the likelihood is that she uses a child care arrangement which does not involve members of the immediate family (Shortlidge, 1975). In the context of the present analysis, the variable is significant and positive for whites, but not for blacks. Thus, the probability that a white woman might search for work with the provision of free center care increases the more favorable her attitude toward the role of women. The racial difference in the performance of this variable may be a function of the generally more favorable attitude toward the role of women outside the home in the black than white community and the greater labor force commitment on the part of black women (Sweet, 1973).

A woman's personal orientation to the labor force is measured by her response to the question "If you were offered a job by some employer in this area, do you think you would take it?" A woman responding affirmatively to this question is considered to have a favorable orientation toward her own participation in the labor force. Since the wording of this question and that of the question used to define the dependent variable are similar, it was included only after careful examination of the simple correlation matrices and of the regression results both with and without this variable indicated that its inclusion did not establish a tautological relationship. For example, the simple correlation coefficient between this attitudinal

variable and the dependent variable was .3 for whites and .4 for blacks. Furthermore, the inclusion of the variable failed to affect significantly the coefficients of the other independent variables in the model. Thus, it is concluded that the variable measured the woman's own personal work orientation which is independent of her generalized attitude toward the role of woman measured by the other attitudinal variable, her educational attainment, family income, and the other explanatory variables in the model. The proportion of black women with a favorable orientation toward their involvement in the labor force is 46 percent compared to 19 percent for white (Table 1). For both blacks and whites, a favorable predisposition toward market work is positively and significantly related to the likelihood of looking for work given the availability of free center care.

The number of weeks worked since 1969 was included in the model to measure the impact of recent work exposure. However, the variable is significant in neither the white nor the black equation. Thus, the responsiveness of women to the availability of free day care centers appears to be independent of their recent exposure to the labor force. The absence of a significant relationship may be explained by the presence of two opposing effects cancelling each other out. For example, a woman's exposure to the labor force may be associated with a pleasant, unpleasant, or neutral work experience. The signs of this variable in the two equations suggest that recent exposure to the labor force had a positive, albeit nonsignificant, impact on the potential future labor force response of whites and a negative impact on that of blacks.

Family Income

The expected inverse relationship was found between family income (exclusive of the woman's own contribution) and responsiveness to free day care centers. Therefore, the propensity to search for employment with the availability of free center care may be expected to have a similar negative relationship with family income. Although income is negatively associated with the probability of looking for work it prevails only for black women. Thus, to the extent that one can rely on responses to the hypothetical question, a program of free day care centers would encourage low income blacks to search for employment. The racial difference in the behavior of this variable may be a function of black-white differences in preference for nonfamily forms of child care; for, in general, black women have a more favorable attitude than white women toward the use of day care centers (Shortlidge and Brito, 1977). Thus, some other child care program designed to take into account the preference of whites for in-home care might attract proportionally more low than high income white women into the labor force.

Education

Since female labor force participation varies directly with education (Cain, 1966; and Mincer, 1962), a positive association between educational attainment and the likelihood of entrance into the labor force with the provision of free day care centers might be expected. However, recent analyses of household time-budget data find that a mother's educational attainment is directly correlated with the amount of time that she devotes to the care of an infant or a preschooler (Gronau, 1973; Hill and

Stafford, 1974; and Leibowitz, 1974a and 1974b). On this basis, one might suppose that the better educated women would be less likely to wish to avail herself of the services of day care centers. It is uncertain a priori which of these two effects will predominate.

The results in Table 2 suggest that the latter effect is stronger for both black and white women, although the negative relationship between education and responsiveness to free day care centers is not significant for blacks. This racial difference is consistent with both the greater commitment to the labor force and the more favorable attitude toward center care among blacks.

Residential and Environmental Characteristics

Characteristics of the community in which a woman lives could influence how she would respond to the availability of a free day care center. Women who reside in labor markets which offer more female employment opportunities may be expected to be more likely to look for work than those who live in areas with limited employment opportunities for women. Two variables are included as proxies for labor market conditions. The first is a measure of the proportion of jobs in a locality which might be expected to be occupied by women based on the area's industrial mix (Bowen and Finegan, 1969, pp. 772-76). The second is a rural-urban distinction. Rural areas may be expected to offer numerically fewer job opportunities than urban ones. However, relative to urban communities the cost of caring for young children tends to be significantly higher in rural communities (Shortlidge and Brito, 1977). A program of free day care centers could, therefore, have a more pronounced

impact on the cost associated with market work in rural than in urban communities. This reasoning argues for hypothesizing a positive relationship between residing in a rural area and the probability of searching for employment with access to free center care. However, the LOGIT results indicate the absence of a significant relationship for both these variables (Table 2).

Two regional variables are included to reflect differences in the supply of and demand for day care centers. Reliance on center care has been historically greater in the South and the West (Barker, 1972; Low and Spindler, 1968; and Shortlidge and Brito, 1977). However, the LOGIT results indicate that area of residence would not be a significant factor determining who would be likely to seek work with the availability of free day care centers.

II SUMMARY

In this analysis, the potential female labor supply response to the provision of free day care centers has been examined on the basis of responses to a hypothetical question. Among women who were not working outside the home in 1971, approximately one of every five white women and one of every two black women reported that they would seek work if a free day care center were available to them.

One cannot be certain, of course, that responses to a hypothetical question indicate what women will in fact do under the hypothesized condition. Nevertheless, if one is willing to accept such responses as indicative, a number of relationships that have been found are of interest. The finding that a program of free center care would attract proportionally

more black than white women with young children into the labor force is consistent with a more favorable attitude toward reliance on day care centers among blacks. Thus, such a program might substantially reduce the constraining effect of children on the market activities of black women, while only marginally affecting the labor supply of white women. Even among white women, although its overall impact might be limited to about 20 percent of those out of the labor force, it would apparently have a substantially greater effect among the important subcategory who head their own households and do not have access to other family members for child care purposes. For both whites and blacks, the program's impact would be more pronounced among women who had a favorable orientation toward their own work outside the home. Such an orientation is stronger among blacks than whites.

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